WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:

calculation means for performing a predetermined calculation with the use of a digital image and confidential information; and

generation means for generating signature data with the use of an output of said calculation means in order to detect the integrity of the digital image.

2. An image processing apparatus according to Claim 1, wherein an inverted calculation of the predetermined calculation is possible.

3. An image processing apparatus according to Claim 1, wherein said generation means generates the signature data by the use of a one-way function.

4. An image processing apparatus according to Claim 1, wherein said generation means generates the signature data by the use of a secret-key cryptosystem.

5. An image processing apparatus according to Claim 1, wherein the confidential information relates to the image processing apparatus.

6. An image processing apparatus according to Claim 1, wherein the confidential information relates to a user who uses the image processing apparatus.

7. An image processing apparatus according to Claim 1, wherein the digital image is highly efficiently encoded.

8. An image processing apparatus according to Claim 1, further comprising an image pickup unit for generating the digital image.

9. An image processing apparatus according to Claim 8, wherein said calculation means performs the predetermined calculation every time said image pickup unit generates the digital image.

10. An image processing apparatus according to Claim 1, wherein the image processing apparatus serves as a digital camera.

11. An image processing apparatus according to Claim 1, wherein the image processing apparatus serves as a scanner.

12. An image processing apparatus comprising:

input means for inputting a digital image and signature data used for detecting the integrity of the digital image;

calculation means for performing a predetermined calculation with the use of the digital image and confidential information; and

detecting means for detecting the integrity of the digital image, with the use of the signature data and a result of the predetermined calculation.

13. An image processing apparatus according to Claim 12, wherein an inverted calculation of the predetermined calculation is possible.

14. An image processing apparatus according to Claim 12, wherein said calculation means performs the predetermined calculation with the use of a one-way function.

15. An image processing apparatus according to Claim 12, wherein said calculation means performs the predetermined calculation with the use of a secret-key cryptosystem.

16. An image processing apparatus according to Claim 12, wherein the confidential information relates to a unit for generating the signature data.

17. An image processing apparatus according to Claim 12, wherein the confidential information relates to a user who uses a unit for generating the signature data.

18. An image processing apparatus according to Claim 12, wherein the digital image is highly efficiently encoded.

19. An image processing apparatus according to Claim 12, wherein a result of detection achieved by said detecting means is sent to a display unit.

20. An image processing apparatus according to Claim 12, wherein the image processing apparatus serves as a computer.

21. An image processing method comprising the steps of:

performing a predetermined calculation with the use of a digital image and confidential information; and

generating signature data with the use of a result of the predetermined calculation in order to detect the integrity of the digital image.

22. An image processing method according to Claim 21,

wherein an inverted calculation of the predetermined calculation is possible.

23. An image processing method according to Claim 21, wherein the predetermined calculation is performed with the use of a one-way function.

24. An image processing method according to Claim 21, wherein the predetermined calculation is performed with the use of a secret-key cryptosystem.

25. An image processing method according to Claim 21, wherein the confidential information relates to a device for generating the signature data.

26. An image processing method according to Claim 21, wherein the confidential information relates to a user who uses a device for generating the signature data.

27. An image processing method according to Claim 21, wherein the digital image is highly efficiently encoded.

28. An image processing method according to Claim 21, further comprising the step of inputting the digital image from an image pickup unit.

29. An image processing method comprising the steps of:

inputting a digital image and signature data used for detecting the integrity of the digital image;

performing a predetermined calculation with the use of the digital image and confidential information; and

detecting the integrity of the digital image according to the signature data and a result of the predetermined calculation.

30. An image processing method according to Claim 29, wherein an inverted calculation of the predetermined calculation is possible.

31. An image processing method according to Claim 29, wherein the predetermined calculation is performed with the use of a one-way function.

32. An image processing method according to Claim 29, wherein the predetermined calculation is performed with the use of a secret-key cryptosystem.

33. An image processing method according to Claim 29, wherein the confidential information relates to a device of

generating the signature data.

34. An image processing method according to Claim 29, wherein the confidential information relates to a user who uses a device of generating the signature data.

35. An image processing method according to Claim 29, wherein the digital image is highly efficiently encoded.

36. An image processing method according to Claim 29, further comprising the step of displaying a result of detection on a display unit.

37. An image processing method comprising the steps of:

performing a predetermined calculation with the use of a digital image and confidential information;

generating signature data with the use of a result of the predetermined calculation in order to detect the integrity of the digital image;

externally outputting the digital image and the signature data;

externally inputting the digital image and the signature data;

performing the predetermined calculation with the use

of the digital image and the confidential information; and

detecting the integrity of the digital image, with the use of the signature data and a result of the predetermined calculation.

38. An image processing apparatus comprising:

calculation means for performing a predetermined calculation with the use of a digital image and confidential information; and

generation means for generating signature data with the use of an output of the calculation means in order to determine whether the digital image has been modified.

39. An image processing apparatus comprising:

input means for inputting a digital image and signature data used for determining whether the digital image has been modified;

calculation means for performing a predetermined calculation with the use of the digital image and confidential information; and

detecting means for determining with the use of the signature data and an output of said calculation means whether the digital image has been modified.

40. An image processing method comprising the steps

of:

performing a predetermined calculation with the use of a digital image and confidential information; and

generating signature data with the use of a result of the predetermined calculation in order to determine whether the digital image has been modified.

41. An image processing method comprising the steps of:

inputting a digital image and signature data used for determining whether the digital image has been modified;

performing a predetermined calculation with the use of the digital image and confidential information; and

determining according to the signature data and a result of the predetermined calculation whether the digital image has been modified.

42. An image processing method comprising the steps of:

performing a predetermined calculation with the use of a digital image and confidential information;

generating signature data with the use of a result of the predetermined calculation in order to determine whether the digital image has been modified;

externally outputting the digital image and the

signature data;

externally inputting the digital image and the
signature data;

performing the predetermined calculation with the use
of the digital image and the confidential information; and

determining with the use of the signature data and a
result of the predetermined calculation whether the digital
image has been modified.